

Appl. No. 10/642,352
Amendment Dated September 14, 2007
Reply to Office Action of June 29, 2007

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 15. This sheet, which includes Figs. 15 and 16, replaces the original sheet including Figs. 15 and 16.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

I. Introduction:

The courteous telephone interview granted applicants' undersigned attorney on August 7, 2007 by Examiner Luan Van is hereby respectfully acknowledged. As discussed, the claims have been amended to clarify the invention.

II. Claim Rejections – 35 U.S.C. 112:

With respect to the claim objections and rejections under 35 U.S.C. 132(a) and 35 U.S.C. 112, applicants submit that the limitation of "without exposing an end surface of the body" is supported by the originally filed specification. Claim 48, as previously amended, is directed to a system for preparing electrochemical material. The system generally comprises a high temperature synthesis device 170 for preparing an array of electrolytic surfaces of working electrodes (see, e.g., page 23, line 12 – page 31, line 20 and Figs. 13-16). Each electrode 20 comprises a body 40 and an insert 38 supported by the body. The device comprises a holder block 171 having a plurality of openings 172 formed therein for receiving the array of working electrodes 20 positioned such that a portion of the insert 38 is exposed for forming the electrolytic surface thereon without exposing an end surface of the body.

As described, for example, at page 24, lines 1-9 and page 25, lines 3-6, the device includes a mask 174 having a plurality of openings 176 arranged to align with openings 172 in the holder block 171. The openings 176 are sized to *expose only the insert 38 so that plating (coating) can be applied to the insert without being applied to the body of the rotating disk electrode 20* (Fig. 13).

The subject limitation is also included in original claim 8.

In rejecting the claims, the Examiner states that the amended limitation is unclear because “the instant specification (page 10, lines 12-16) discloses that at least a portion of the outer diameter surface and the front surface of the body is in contact with electrolyte solution.” This sentence describes test measurement conditions in an electrochemical cell such as shown in Fig. 1. Claims 48-51 are directed to a system for preparing electrochemical material. As noted at page 23, lines 12-25, the holder is configured to support electrodes during processing and allow for detachment of the electrodes after processing is complete. After processing, each electrode is detached from the array and placed into a testing apparatus.

Claim 48 has been amended to further clarify that the end surface of the body is located adjacent to the electrolytic surface. Also, Fig. 15 has been amended to include reference number 40 to indicate the location of the electrode body in the holder block 171 with the mask removed.

For the foregoing reasons, claims 48-51 are believed to comply with the requirements of 35 U.S.C. 112.

III. Claim Rejections – 35 U.S.C. 102:

Claims 1-5, 9, 12-14, 23, 27, 28, and 48-50 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,468,410 (Donne).

Donne discloses an apparatus for synthesis and characterization of electrode materials. As shown in Fig. 2, the apparatus includes a base 10 configured to support a plurality of electrode holders 12. Working electrodes 22 are affixed to the electrode holders by screwing working electrode 22 into bore 24 of the holder. Working electrode 22 is counter-sunk into the electrode holder so that the working electrode can be exposed to an electrolysis bath during deposition of a material on a top surface of the working electrode. In rejecting the claims, the Examiner refers to the base of Donne as a mask.

Donne does not disclose a mask having a plurality of openings configured for exposing only a portion of an end surface of each of the working electrodes, as set forth in claim 1. As shown in Fig. 2, the base exposes the entire end surface of the working electrode.

In rejecting the claims, the Examiner states that the apparatus of Donne is “structurally capable of exposing only the end surface of the working electrode 22, because electrode 22 has external threads 26 that would enable it to be positioned or screwed up or down such that it is flush with the holder 12 or body 10 in Fig. 2.” Claim 1, however, requires that the mask is configured for exposing *only a portion of an end surface* of each of the working electrodes for forming the electrolytic surfaces on the working electrodes. If the insert is somehow positioned such that is flush with the holder 12 or body 10, the entire end surface of the insert would still be exposed.

Also, Donne does not disclose a holder block having a plurality of openings for receiving working electrodes positioned such that a portion of an insert is exposed without exposing an end surface of a body of the working electrode, as set forth in claim 48. Claim 48 has been amended to clarify that the end surface of the body is located adjacent to the electrolytic surface.

Applicants’ system is particularly advantageous in that it allows only a portion of the working electrode to be exposed so that processes can be performed on only the exposed portion. For example, the openings may be sized to expose only an insert of the working electrode so that a coating can be applied to the insert without being applied to a body of the electrode.

Accordingly, claims 1 and 48 are submitted as patentable over Donne.

Claims 2-28, depending either directly or indirectly from claim 1, and claims 49-51, depending directly from claim 48, are submitted as patentable over Donne for at least the reasons set forth above with regard to claims 1 and 48.

The other references cited, including U.S. Patent Nos. 2,841,548 (Perlman), 6,423,193 (Miller et al.), and 5,120,421 (Glass et al.), do not overcome the deficiencies of the primary reference.

IV. Conclusion:

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,



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